



# Environmental Technology Verification Program

## QUARTERLY REPORT

April 2000

### 13 New ETV Verifications Boost Program Total to 66!



Four ETV pilots recently verified 13 technologies to increase the total number of ETV verified technologies to 66! The new verification reports and statements are available on the ETV Program web site at <http://www.epa.gov/etv>.

The Air Pollution Control Technology Pilot verified 6 paint overspray arresters (POAs). In total, this pilot has verified 11 POAs from 6 companies:

- ✓ AAF International; Louisville, KY (2 technologies)
- ✓ ATI; Ottawa, KS (2 technologies)
- ✓ Columbus Industries; Asheville, OH (2 technologies)
- ✓ Farr Company; El Segundo, CA
- ✓ Koch Filter Corporation; Louisville, KY (2 technologies)
- ✓ Purolator Products Air Filtration Company; Henderson, NC (2 technologies)

POAs control particle emissions from aerospace paint spraying facilities and are typically composed of one or more stages of disposable fibrous filters. These stages include flat panel filters, pleated panel filters, and pocket filters. In practice, several POAs are mounted to cover the entire wall of a paint booth where the air is exhausted. The POAs are replaced when they become loaded with paint, which could be several times each year for a busy facility.

The Drinking Water Systems Pilot verified a drinking water microfiltration technology. This is the first microfiltration technology to be verified under the ETV Program. This product was developed by:

- ✓ Pall Corporation; East Hills, NY

Microfiltration processes are used to remove microbial contaminants, such as *Giardia* and *Cryptosporidium*, and other particulate contaminants from drinking water. The Pall Corporation WPM-1 membrane is a hollow fiber-type microfiltration membrane made of polyvinylidene fluoride (PVDF). Water is applied under pressure to the outside of the hollow fiber membrane. The membrane consists of a thin film acting as a sieve, which serves as a mechanical barrier, providing removal of particulate contaminants.

EvTEC, the Independent Pilot, verified a wastewater treatment technology. This is the first technology to be verified under the EvTEC Pilot. This product was developed by:

- ✓ ThermoEnergy Corporation; Little Rock, AR

The Ammonia Recovery Process (ARP) is a reversible chemisorption ion exchange process that takes advantage of the high concentration of ammonia that exists in the centrate from wastewater sludge. The centrate is obtained by centrifuging an anaerobically digested sludge. ARP removes the ammonia and recycles it into an agricultural fertilizer.

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# Pilot Points

## Advanced Monitoring Systems

- Held 5th Air Stakeholder Group meeting in Denver, CO on March 9-10.
- Held 5th Water Stakeholder Group meeting in Kiawah Island, SC on March 23-24.
- Completed Optical Open Path Monitor Test Plan in November 1999.

## Air Pollution Control Technology

- Issued verifications for 6 additional paint overspray arrestors.
- Held 7th stakeholder group meeting on March 28.

## Drinking Water Systems

- Issued verification of its first microfiltration technology.
- Selected 9 products to participate in the protocol validation testing effort.

## Greenhouse Gas Technology

- Held 1st Electricity Generation Stakeholder Group meeting in Crystal City, VA in November.
- Completed Phase II testing of C. Lee Cook's Static Pac in February.
- Completed Phase II testing of A&A Environmental Seal Inc.'s Seal Assist System in March.

## P2 Innovative Coatings and Coating Equipment

- Featured as discussion topic of the month for January in the online version of *Products Finishing* magazine.
- Presented at Paint/Depaint: Advanced Techniques for Painting and Depainting Weapon Systems, March 15-16, at the University of Pittsburgh at Johnstown, PA.

## P2 Metal Finishing Technologies

- Presented a paper on the pilot and exhibited the ETV booth at the AESF Week 2000 Environmental Conference in Orlando, FL on January 17-19.
- Finalized 2 test plans for verification testing of aqueous/alkaline cleaner recycling systems.
- Began verification testing of one aqueous cleaner recycling system.

## P2, Recycling and Waste Treatment Systems

- Issued verification of an aerosol can recycling technology.
- Held 3rd stakeholder group meeting on October 28.

## Site Characterization and Monitoring Technologies

- Identified technologies that monitor natural attenuation as a new area for verification.
- Began a 3rd round of verifications for PCB analyzers.
- Issued verifications for 2 decision support software technologies.

## Source Water Protection Technologies

- Held a meeting of the Urban Infrastructure Technical Advisory Group in Houston, TX on March 2.
- Held a vendor meeting in St. Louis, MO on March 7.
- Held a meeting of the Decentralized Wastewater Treatment Stakeholder Advisory Group in Jekyll Island, GA on November 2.
- Held a meeting of the Infrastructure and Watershed Protection Stakeholder Advisory Group in Baltimore, MD on November 18.

## Wet Weather Flow Technologies

- Held vendor meetings for high-rate treatment technologies and separation/clarification technologies in October.
- Held a Flow Meter Technology Panel teleconference in December.

## Environmental Technology Evaluation Center (EvTEC)

- Issued verification of ThermoEnergy's Wastewater Treatment Ammonia Recovery Process in January.
- Facilitated a two-day workshop for Vista Research UST Leak Detection Technology in Port Hueneme, CA on November 3-4.
- Began a group verification of cement technologies aimed at mitigating climate change.
- Began a group verification of bio-based fiberboards in the construction industry.

## Web Watch

**Note:** During late February, portions of EPA's web site became inaccessible due to security issues. In early April, all ETV homepage functions were brought back online, and many updates have been made. Highlights are provided below.

- ✓ Verification reports for the 13 newly verified technologies are available at <http://www.epa.gov/etv/library.htm>.
- ✓ The final test plan for a biological degreasing system for the recycling of alkaline cleaners is posted at <http://www.epa.gov/etv/library.htm>.
- ✓ The technology profile for 11 paint overspray arrestors is available at <http://etv.rti.org/apct/documents.cfm>.

## ETV Program Undergoes Science Advisory Board Review

The Technology Evaluation Subcommittee of the Environmental Engineering Committee of the Science Advisory Board (SAB) conducted a review of the quality management aspects of the ETV Program during a three-day meeting from March 6-8, 2000. The SAB is an independent board that reviews major programs within EPA based on specific requests and provides responses and recommendations to the EPA administrator. The following SAB members were in attendance: Dr. Michael J. McFarland, Utah State University (Chair); Dr. Edgar Berkey, Concurrent Technologies Corporation; Dr. Barry Dellinger, Louisiana State University; Dr. Gordon Kingsley, Georgia Tech; and Dr. John P. Maney, environmental consultant. The main purpose of this SAB review was to evaluate the implementation of quality management in the ETV Program. It included a review of the *ETV Program Quality and Management Plan* as well as an evaluation of the quality management and replicability of eight final generic verification protocols from seven ETV pilots. Formal feedback from the SAB is expected in the next month.

**T**he P2, Recycling and Waste Treatment Systems Pilot verified an aerosol can recycling technology developed by:

✓ *Katec, Inc.; Virginia Beach, VA*

The Aerosolv® Aerosol Can Recycling System punctures and drains waste aerosol cans while collecting their liquid contents in a storage drum and treating gases and vapors with a carbon filter. Treated waste aerosol cans may then be recycled as scrap metal. The collected liquids and used carbon filters are classified as hazardous or non-hazardous waste and managed accordingly.

**T**he Site Characterization and Monitoring Technologies Pilot verified four technologies in two categories: decision support system (DSS) technologies and sediment sampling technologies. The DSS technologies were developed by:

✓ *Environmental Software; Huntington Beach, CA*

✓ *Environmental Systems Research Institute; Vienna, VA*

DSS technologies are designed to help environmental professionals quickly and comprehensively characterize and manage information relevant to understanding environmental contamination problems. The DSS technologies integrate databases and geographic information systems (GIS), and may also include computer-aided design (CAD), mapping, contouring, boring logs, cross-sections, graphing, imaging, and reporting. This integration provides support for decisions pertaining to monitoring and remediation.

The sediment sampling technologies were developed by:

✓ *Aquatic Research Instruments; Lemhi, ID*

✓ *Art's Manufacturing & Supply, Inc.; Sauk City, WI*

Sediment sampling technologies are designed to collect undisturbed and uncompressed sediment core samples, allowing for more representative laboratory analysis results.

## **ETV is a Semifinalist for the Innovations in American Government Award**



**T**he ETV Program was selected from a pool of approximately 1,400 applicants as one of 100 semifinalists eligible for the 2000 Innovations in American

Government Awards. This award program is sponsored by the Ford Foundation and is administered by the John F. Kennedy School of Government at Harvard University. These awards are given to federal, state, and local public sector initiatives and are intended to draw attention to exemplary achievements in creative problem-solving for an issue that is of significant concern to a portion of the American public.

**S**ince 1986, 230 innovative programs have been recognized, with 125 programs receiving \$100,000 grants and 105 programs receiving \$20,000 grants. The next step in the awards process is the selection of 25 finalists, which will be announced in late spring. Ten of the 25 finalists will be selected to receive awards, which will be issued in October. For more information on the awards program, go to <http://www.innovations.harvard.edu>.

## **UNEP Becomes a Major Player in Environmental Technology Verification**

**I**n May 1999, a two-day meeting was hosted by the ETV Program in Washington, DC where the United Nations Environment Programme (UNEP), EPA and its ETV partners, and Canada discussed the North American experience with respect to environmental technology assessment and verification. As a follow-on to that meeting, on January 24-25, 2000, Penny Hansen of ETV participated in an

Expert Group Meeting of UNEP on "Assessment of Investment Projects for Sustainable Development" in Paris. This meeting was chaired by Jacqueline Aloisi de Larderel, Director of UNEP's Division of Technology, Industry and Economics, and was attended by 40 participants from around the world.

The main purposes of this exploratory meeting were (1) to examine the promotion of investments for sustainable development through the assessment of environmental performance of technologies, products, projects, and companies, and (2) to discuss the general lack of investment in environmentally friendly technologies by the financial community, particularly in developing countries. Primary focus was on the information gaps and overall lack of direction that characterize the incorporation of environmental parameters and concerns into financial decisionmaking. As a result of this meeting, UNEP and the financial sector will work together more effectively to achieve sustainable development solutions. Specifically, UNEP will begin to play a major role in engaging international financial institutions, development banks, and export credit agencies to ensure that solutions are appropriate for developing countries.

Following the January 2000 meeting, UNEP played a prominent role at the Globe 2000 Verification Workshop hosted by the Canadian government in Vancouver, British Columbia on March 22-24, 2000. Surya Chandak, the Cleaner Production Coordinator for UNEP, provided the keynote address, where he identified highly credible performance data from independent third-parties as the key to the success of the newly emerging environmental technology verification movement.

### **Would you like to be on our listserv?**

- 1. Send an e-mail message to [listserver@unix-mail.rtpnc.epa.gov](mailto:listserver@unix-mail.rtpnc.epa.gov).**
- 2. Please, don't include a subject line in your message; however, you may add a period "." if your mailserver requires an entry.**
- 3. The body of your message should say: subscribe ETVoice firstname lastname**

# ETV Events

<u>Date</u>	<u>Location</u>	<u>Event</u>
<b>April 6-8</b>	<b>Denver, CO</b>	<b>ETV Program - presentation at Convergence: Connecting Government, Technology and the Citizen, Public Technology, Inc. (PTI)'s 2000 Annual Member Conference</b>
<b>April 7</b>	<b>Denver, CO</b>	<b>Drinking Water Systems - presentation to the PTI Environmental Task Force at their Annual Member Conference</b>
<b>April 10</b>	<b>Lansing, MI</b>	<b>Wet Weather Flow - presentation at Stormwater Treatment: Evaluation of New Technologies Conference</b>
<b>April 9-12</b>	<b>Baltimore, MD</b>	<b>P2 Coatings and ETV Program - attendance at RadTech 2000 Conference</b>
<b>April 11</b>	<b>Manchester, NH</b>	<b>ETV Program - ETV booth exhibit at the Erosion and Sediment Control Technologies Trade Show</b>
<b>April 13</b>	<b>Worcester, MA</b>	<b>ETV Program - ETV booth exhibit at the Erosion and Sediment Control Technologies Trade Show</b>
<b>April 19</b>	<b>Washington, DC</b>	<b>EvTEC - Advisory Council Meeting</b>
<b>May 7-10</b>	<b>Rochester, NY</b>	<b>Wet Weather Flow - presentation at WEF Specialty Conference - Collection Systems Wet Weather Pollution Control</b>
<b>May 9-11</b>	<b>Boston, MA</b>	<b>ETV Program - presentation at EnviroExpo 2000</b>
<b>May 15-18</b>	<b>Atlanta, GA</b>	<b>ETV Program - presentation at WasteExpo 2000</b>
<b>June 11-15</b>	<b>Denver, CO</b>	<b>ETV Program - ETV booth exhibit at the 2000 Annual Conference and Exhibition of the American Water Works Association (AWWA)</b>
<b>June 14-16</b>	<b>Denver, CO</b>	<b>ETV Program - ETV booth exhibit at the 2000 Drinking Water Conference</b>
<b>June 16-17</b>	<b>Denver, CO</b>	<b>ETV Program - ETV booth exhibit at the 2000 Indoor Air Quality Conference</b>
<b>June 18-22</b>	<b>Salt Lake City, UT</b>	<b>ETV Program - ETV booth exhibit and presentation at the 93rd Annual Air and Waste Management Association's (A&amp;WMA's) Annual Meeting and Exhibition</b>
<b>June 26-29</b>	<b>Chicago, IL</b>	<b>ETV Program - ETV booth exhibit and paper presentation at the American Electroplaters and Surface Finishers Society's SUR/FIN 2000 Conference and Exhibition</b>

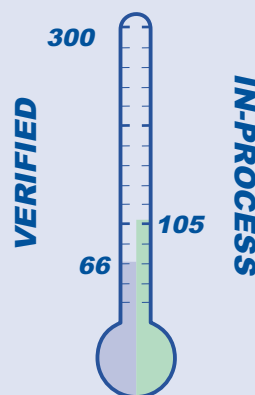
*For more details on ETV events, check out our online calendar at <http://www.epa.gov/etv/highup.htm>*

## ETV Briefs State and Local Officials on Air Pilots

On March 1, 2000, Penny Hansen, Director of the ETV Program, and Jack Farmer of Research Triangle Institute - the private sector partner to the ETV Air Pollution and Control Technology Pilot - briefed state and local officials at a Title V Permitting Workshop in Dallas, Texas. This workshop was sponsored by the State and Territorial Air Pollution Program Administrators (STAPPA), the Association of Local Air Pollution Control Officials (ALAPCO), and the U.S. EPA. The presentation provided general information on the ETV Program, including information on ETV goals, stakeholders, testing activities, and quality criteria. The presentation also included information on the air pollution control technologies that have been verified and those that are in the process of being verified.

Also, on April 13, 2000, Hansen briefed the Northeast States for Coordinated Air Use Management (NESCAUM) at their biannual meeting in Hartford, CT. NESCAUM is an association of eight state air quality control division directors in the northeastern U.S., including the New England states, New York, and New Jersey. NESCAUM is primarily interested in the air pollution monitoring and control tech-

## GOAL: 300 Technologies Verified by 2005



nologies of the Air Pollution Control Technology Pilot and the Advanced Monitoring Systems Pilot. These states also expressed interest in the Greenhouse Gas Technology Pilot. The ETV Program plans to continue to provide information to this group on air and greenhouse gas technology pilots and verifications.